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# PATENT ABSTRACTS OF JAPAN

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## (54) CRANK SHAFT AND MANUFACTURE THEREOF

### (57) Abstract:

**PURPOSE:** To enable a contact surface pressure to be kept at a substantial equal value of a conventional type of a shrinkage fit by a method wherein a web member and an axial member can be fixed with a quite small axial pushing force (a pushing force of about 1/10 of a conventional dry type pushing) and further a hydraulic pressure is released after their fixing operation.

**CONSTITUTION:** In a crank shaft in which an axial member 12 is press fitted into the fitting bore of a web member 11, the fitting surfaces 11a and 12a of the web member 11 and the axial member 12 are formed with axial tapered surfaces, an oil groove 13 is formed in the web member 11 and/or axial member 12 at their fitting surfaces and then the members 11 and 12 are

separately formed. Axial force is applied to both members 11 and 12 while the hydraulic oil is fed to said oil groove 13 and then the axial member 12 is forcedly fitted into the web member 11.

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